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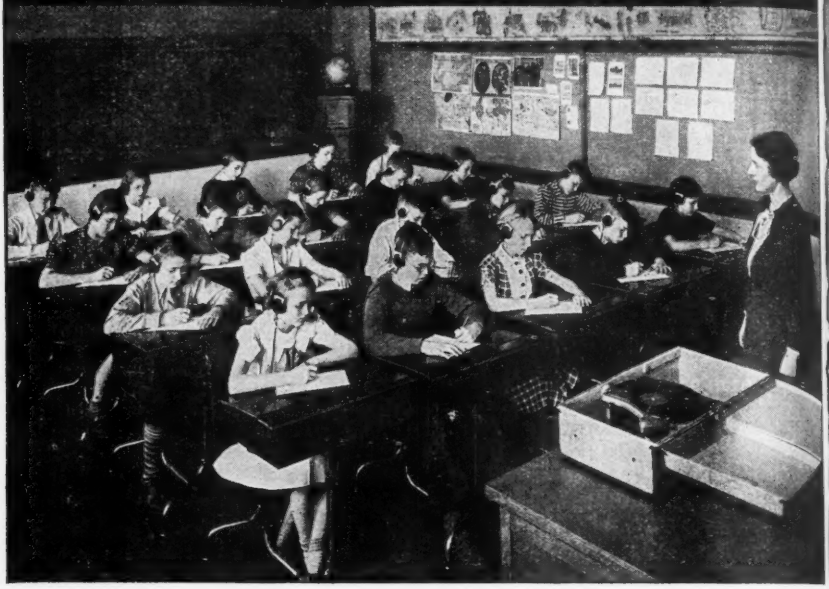

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Vol. VIII MARCH, 1938 No. 3

NEGLECTED HEALTH FACTORS IN PUBLIC SCHOOLS*

WILLIAM ROSENSON, M.D.

Medical Advisor, Health Committee, United Parents Association, New York City

In New York City, the Child Guidance Bureau has recently been established for the study and treatment of the child who is maladjusted, whether it be emotionally, socially, or intellectually. This marks a very important advance in the long-neglected field of preventive mental health. There, also, the introduction of the activity program, a stimulating and most wholesome method of progressive education, will undoubtedly prove helpful.

There are, however, in the public schools of New York City with which this study is for the most part concerned, a number of conditions, methods, and customs which are definitely harmful to the child's health, and which require complete revision. The effects of these conditions upon the child's health are seldom seen by the public health worker or the educator to whom are entrusted the direction of the school health program. They are seen very frequently by the pediatrist in his daily work and contacts with children and parents. I shall introduce the discussion of these neglected health factors by citing a few cases.

A boy of ten was brought to me because of abdominal pain and vomiting. These symptoms came on after lunch and on his way back to school for the afternoon session. The child lived eight blocks from school. The short lunch period, fifty minutes, allowed him no time to eat an adequate meal. He rushed home, gulped his food, and raced back to beat the lateness gong. On the way he would often vomit the half-chewed food. The symptoms did not occur on school holidays. Physical examination was negative.

Within the past month, I saw a girl of twelve years, twenty pounds under-weight. When I inquired about her feeding schedule, her mother assured me that it was impossible for the child to snatch more than a "bite" at noon as the school lunch period was entirely too short.

The following case illustrates how an outworn, unwholesome attitude toward the school attendance records often proves seriously harmful to the child's health. A girl of eleven was seen at home with all the classical symptoms and signs of lobor pneumonia. A week previously the child had had a severe "cold," but had insisted on attending school even in inclement weather in order that her class should maintain its much coveted 100%

*Reprinted from New York State Journal of Medicine, January 1, 1938, pp. 7-11.

attendance record. The teacher had so overstressed the importance of this, that the child could not be persuaded by her parents to remain at home. She attended school to uphold the class honor, until a severe chill proclaimed the onset of a disease which kept her home for six weeks.

In another case, frequent gastrointestinal disturbances occurred because of the filthy, insanitary conditions of the school lavatory. A girl of thirteen from a household of decent standards, refused to attend to her natural needs for bowel evacuation. This produced attacks of severe abdominal discomfort and constipation.

An adolescent girl of fourteen attending high school was brought to me because of persistent tired feeling and loss of appetite. On taking a school history, I learned that she seldom had any time for outdoor fresh air and exercise because of the tremendous amount of homework. Each one of her five departmental teachers assigned an hour or two of work almost every day. The child rarely got to bed at night before 11 o'clock. I weighed her pack of books which she carried to and from school, and found they weighed fourteen pounds.

Lack of cooperation on the part of some school supervisors and their lack of insight in mental hygiene problems are illustrated by the following case. During the early part of last year I was very frequently summoned by an overanxious mother to see her son of eleven. The usual complaints were indefinite pains in the throat and head. At no time was there any elevation of temperature. At each visit physical examination was entirely negative. I suspected that the boy was feigning illness in order to remain away from school. He eventually admitted this. At school, however, he always attained the highest marks. His I.Q. test was 150. The obvious deduction was that the work in the classroom was too simple for him, that he was bored, and that he should be placed in a higher grade. I explained this to the mother, and we took the matter up with the principal of the school. The latter disagreed with the findings and recommendation, was very resentful of any suggestion from the pediatrist, and the boy continued to have his symptoms. This year, however, there was a reorganization of classes in that school, and it was found convenient to have my patient skip a class to one which has proven to be far more stimulating. I am now rarely summoned to the home, and when on occasion the boy is really sick, we can hardly keep him away from school.

These cases are typical of many that I have observed in the private practice of pediatrics, and during the course of institutional work with children. Some of the important factors responsible for these unhealthy conditions in the New York City Public School system are the short lunch period, the overemphasis on attendance records, the insanitary conditions, excessive homework, over-crowded classes, and the insufficient knowledge and

practice of the mental hygiene approach to children's problems on the part of many teachers and supervisors. In addition to the case histories of school children, the facts to be presented here regarding these subjects have been obtained from personal visits to a number of schools, from talks with parents and teachers, and as a member of several school health committees.

The Luncheon Period.—The recess allotted for luncheon in the elementary school is fifty minutes. The child is usually dismissed at 12 M., and is marked late if he returns to the class room after ten minutes to one. He is expected to be on time in the yard not later than a quarter to one. This leaves at most forty-five minutes to leave the school building, to travel home and back to school, to eat lunch, to wash up and attend to necessary wants, and, in walking, to guard against street accidents by watching the traffic carefully and the traffic signals. The schools are situated from one to eight blocks from the homes.

In many instances the task is an impossible one. There is no time for an adequate lunch. Much of the food is omitted or gulped. The nervous strain attending this hurry frequently causes a lack of appetite and fatigue.

The short lunch period allows no time for relaxation after the meal, so essential after the morning's work. Seham[1], whose work on fatigue in the child is well known, says of the luncheon period: "Every child should be required to remain at the table for thirty minutes. Before returning to school he should spend fifteen minutes in complete relaxation. The rest, coupled with the walk home from school, will help to neutralize the morning's fatigue."

In 1925, when I first became interested in this subject, I sent a questionnaire to the Boards of Education of the ten largest cities in the United States ranking next in population to New York and obtained the following data regarding the lunch period:

Chicago	1 to 1¼ hours	Baltimore	1¼ hours
Boston	1¼ hours	San Francisco	1 hour
Philadelphia	1½ hours	Detroit	1¼ to 1½ hours
Pittsburgh	1 to 1¼ hours	Cleveland	1½ hours
St. Louis	1 hour 10 mins.	Los Angeles	1 hour

In 1930 the New York County Medical Society through a sub-committee on the Length of School Lunches of the Committee on the Health of School Children made a survey of this subject. Ninety questionnaires were sent to representative child welfare organizations, individual leaders in various universities interested in child hygiene, and pediatrists familiar with school health conditions in New York City.

1. The Tired Child; Max Seham, M.D., and Grete Seham, M.D., J. B. Lippencott Co., Philadelphia, 1926.

Fifty-three replies were received. Only two favored the present schedule; fourteen favored one hour, nineteen favored 1¼ hours, and eighteen favored 1½ hours. In its report published in 1931, the committee suggested that the fifty minute luncheon period should be changed to 1¼ hours.

The Attendance Problem.—Regular attendance at school should be encouraged, but when this is overstressed, it often becomes subversive to good health. In some schools the attendance is made the subject of keen competition between the classes, and a large placard marked "100%" is displayed on the door of the classroom that has no child absent during the designated period. Prizes and banners are awarded for the best attendance record.

If a pupil becomes ill and remains at home, his particular class may lose its pre-eminence. The child with a keen sense of loyalty or perhaps of fear is apt to disregard or conceal early symptoms which may later prove to be serious. He comes to school to uphold the class record, only to intensify his own symptoms and to spread the infection among his classmates.

It has long been the practice to send a monthly report to each school giving a comparative rating on the basis of attendance. Some principals finding their school low in the list and desirous of making a good record are apt to put pressure upon the children directly or through the classroom teacher. This sometimes leads to punishment for absences even in the case of illness.

In 1935 a survey of the Committee on Child Health and School Attendance of the United Parents Association found that "in some schools all absences were punishable alike whether due to illness, truancy, or other causes. Punishments of children who had been absent because of illness included the withholding of the commendation card even in the case of the child of high academic achievement; marking the child zero for those classes from which he had been absent for a given day; in crowded classrooms sending the child who had been absent to the back of the room to share a seat rather than permitting him to return to the individual seat to which he had previously been assigned, or threatening the child with various dire penalties if he should fail to attend school regularly."

I am fully aware that neither the Board of Education nor the Superintendent of Schools in New York City wants sick children in the classroom nor do they want punishments meted out for legitimate absences. But as long as keen competition for attendance records between pupils, between classes, and between schools is fostered by the school authorities, it is difficult to eliminate the undue pressure upon the child.

The attendance record can be kept up best by making the school work attractive and stimulating to the child. Where this is done, as it is in some classrooms, there is no attendance problem.

An underlying contributory factor in stimulating the drive for the high attendance record has probably been our system of state financial aid. Under

this plan, the amount of money granted by the State of New York to its various cities for educational purposes depends upon the number of children in actual attendance. A deduction is made for every day that a child is absent. In New York, such deductions for absences have cost the city as much as $270,000 in one winter month. The actual expenditure for operating the schools remains the same whether children are absent or not. It would seem more reasonable that state aid should be granted on the basis of the number of teachers and supervisory staff employed in the educational system. Such a plan has been employed in Philadelphia and Pittsburgh.

Sanitary Conditions.—Sanitary conditions in many of the schools are a distinct menace to the child's health. I have known a large number of children who find it impossible, because of the filth and stench, to use the lavatories and frequently suffer unnecessary discomfort and pains. I have visited a number of such school lavatories and found them entirely unfit for use—dirty, inadequately flushed, surcharged with an ammoniacal odor, and without toilet tissue. According to a recent survey by the Health Committee of the United Parents Association in only fourteen schools of fifty-one visited did the lavatories conform to modern standards. Nineteen still had the old-fashioned outside toilets, some without even a connecting shed to the main part of the building. Seats are of the "old square wooden type painted a dingy gray."

There is no adequate equipment for washing the hands. No soap or towels are provided. Some schools have no wash basins. It seems incredible that such an elemental principle of health and decency as washing the hands should be entirely neglected in the largest educational system in the country. While children are taught the importance of cleanliness and personal hygiene in the classroom, no efforts have been made to provide them with the first essentials to carry out these teachings.

The school lavatories are frequently without supervision, and are unprotected from intruders. No matrons or attendants are assigned to these important posts. The entire set-up has a most unsavory, unhygienic atmosphere.

In some instances the condition of the lavatories is undoubtedly due to the "contract system" of custodial service under which the custodian receives a lump sum to keep the school in order. The fewer assistants he employs for this purpose the larger his personal income. Although theoretically the custodian is responsible to the principal, it is amazing to learn what little influence the principal really has. From my conversations with a number of principals, I am forced to the conclusion that the principals are more afraid of the custodians than the custodians are of them. For the protection of the school child's health the contract system should be abolished.

Excessive Homework.—While efforts have been made in recent years

to reduce the amount of homework in the lower grades of the elementary schools, nothing has been done about this matter in the upper grades and in the high schools.

Four and five hours of work after a full day at school is undermining the health of thousands of our adolescent children. At this period especially, they require relaxation, fresh air, and healthful outdoor exercise. Instead we find children already tired from their school work embarking on another long period of mental exertion at home, often in crowded quarters under artificial light and retiring at 11 or 12 P. M. A great many suffer from chronic fatigue, anemia, loss of appetite, scoliosis, and eye strain.

On the whole, the job of the school child in the upper grades and high school is one that no adult would tolerate. It is about time we drew up a bill of rights for the school child. How about a maximum hour law?

Mental Hygiene and the Overcrowded Classroom.—For the prevention of mental disorders and juvenile delinquency, there is no more important subject today than that of mental hygiene. The school child, in the classroom one-third of his waking hours, is tremendously influenced by the teacher in his mental and emotional reactions. I have observed the metamorphosis of the nervous, irritable, unhappy child into a normal joyous personality by the change of a teacher. I have seen tics and enuresis disappear in a like manner.

Many teachers, untrained in aspects of mental hygiene, do not realize to what extent their actions and words affect the personality of the child. One descriptive epithet, unwittingly uttered, often stirs up feelings of inferiority in the child which may have a lasting effect on his future behavior.

All too often the teacher untrained in mental hygiene fails to recognize in the shy "goody-goody" of the class the asocial child who, withdrawing into a world of his own, may be an incipient dementia precox. She may not realize that the obviously "troublesome" child to whom she is giving all of her attention may be much the healthier of the two.

Teachers must be trained to consider the health of the school child not only from the physical but the mental hygiene angle. Mental hygiene courses for every teacher should be made compulsory.

The overcrowded classroom makes it difficult for even the trained teacher to create and maintain a wholesome and healthful atmosphere in the classroom. It is impossible to expect one teacher to give intelligent instruction and guidance to forty to fifty (at times even more) children. There is no time for any individual attention. There are in New York City at the present time almost six thousand classes with registers between forty and fifty-five children. No class should have more than thirty-five children.

Conclusions.—The program outlined here for the protection of the school child's health in New York City is not a Utopian one. It is based

on health principles which are elemental, so obvious as to be axiomatic. It includes the following recommendations:

1. Increase of the school lunch period from the present fifty minutes to 1¼ hours.
2. Competition for one hundred per cent attendance records to be abolished.
3. Revision of the State aid law so that funds be granted on the basis of the number of teachers and supervisory staff employed instead of on the basis of attendance.
4. Modern clean toilets under proper supervision by attendant and matron.
5. Soap, towels, and wash basins.
6. Abolition of the "contract system" of custodial service. Sufficient help to insure cleanliness of the entire school building.
7. Excessive homework for all classes in elementary schools and high schools to be curtailed.
8. Thorough mental hygiene courses for all teachers to be made compulsory.
9. Development of the mental hygiene approach.
10. Maximum number of pupils in any class to be thirty-five.

The practical application of these suggestions would entail the expenditure of considerable effort and additional funds. It is essential, however, that they be carried out. The returns in healthier and happier children will undoubtedly justify our endeavors.

* * * * *

Safety Education.— The February, 1938 issue of New York State Education, the official publication of the New York State Teachers Association, devotes its first thirty pages to a series of articles on safety, safety education, and the safety education curriclum. This is a splendid effort to make teachers and school administrators "safety conscious".

* * * * *

One Hundred Years.— Approximately one hundred years ago the need of professional supervision in city school systems became so apparent that the first city superintendents of schools were appointed: in Buffalo, in Louisville, and in Providence. The present trends of the functions of this official are interestingly discussed in the American School Board Journal for February 1938.* Those engaged in school health activities should read this article. Usually the Superintendent of schools or the Board of Education is a subscriber. *One Hundred Years of the City Superintendency—Next Steps, Theodore Lee Reller, pp. 27.

DENTAL HEALTH EDUCATION — CAN SCHOOL CHILDREN GET IT?

KENNETH A. EASLICK, D.D.S.
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In a past issue of the woman's magazine that gives seals of approval to its advertisers, there were nine discussions on dental care. These nine points, presumably, constitute a nucleus for an adequate mouth program for the average citizen. Here they are in order: (1) Massage with —— tooth paste will prevent "pink toothbrush"; (2) —— oranges lessen tooth decay 57 per cent; (3) —— tooth powder prevents that "corn-on-the-cob" smile; (4) —— the aristocrat of mouthwashes, insures mouth cleanliness; (5) irradiated —— milk supplies the essential vitamin D to make strong, firm teeth; (6) —— is the only brush which gets tartar from behind your front teeth; (7) keep dentally fit, eat —— grapefruit twice a day; (8) feed children ——for strong bones and strong teeth; (9) at eighteen, her teeth look forty because she used a half-way tooth paste instead of ——. Not one of these statements is true, and neither of these tooth pastes has been accepted by the Council on Dental Therapeutics of the American Dental Association; nevertheless, the health education of the dentist's patients (including his schoolteacher patients) has been usurped largely by the drug-store window, the popular magazine stand, and the radio broadcasting studio.

It is probably trite to recall that we are living today in an age of automobile travel, or of airplane and streamlined railway transportation, if one prefers. Many of the patients who register at the School of Dentistry's Operative Clinic at the University of Michigan are still living in a horse-and-buggy age of knowledge of dentistry. Dentistry has improved in the last twenty-five years even more rapidly than transportation has improved. The senior student, who graduates from the School of Dentistry today, feels very sincerely that he is entering a health service profession. He has learned much about the changed viewpoint of the dentist in regard to his own profession. He knows that the early American dentist merely looked at a patient's teeth, found the obvious cavities, filled the obvious cavities, and dismissed the obvious patient. He has been taught that Orthodontics developed and that the dentist then discovered a mouth behind each tooth. He has read how the pioneers in preventive medicine and preventive dentistry discovered that an occasional infection about a tooth root could be transported to a knee joint, a heart valve, or a kidney pelvis, and that the dentist immediately discovered a patient behind each mouth. During his years in school, he has seen a social security act begin to function, and has watched the dentist suddenly discover that there is a community behind each patient. The newer dentist is not only going to be interested in the physical health of his community, but likewise in the mental, emotional, and social health

of the citizens of his community. Very many of the senior dental students are assigned clinical patients who still look at dentistry as a purely mechanical craft, one that finds and fills cavities in teeth, that takes teeth out when cavities get too large, that replaces teeth entirely when too many teeth are lost.

One may well wonder why patient knowledge of dentistry lags so far behind senior dental student knowledge of dentistry. The reason would seem to be a lack of adequate and authentic dental health education. Few patients, few teachers, and not many public health workers realize what is included in a good dental health program for a small child's mouth. Some dental health education can be taught in the ideal teaching situation by the dentist to the patient in his dental chair, and some knowledge of adequate dentistry can be spread by means of organized dentistry programs, lectures, radio broadcasts, and newspaper articles. The most fruitful source for health teaching is the schoolroom, but how many teachers have sufficient authentic information to direct an approach to the school child's dental health training?

Fewer and fewer parents, thanks to medical health education, are afraid of immunization for their children; fewer parents trust their grandparents' medical folklore; and fewer new mothers today think that maternal impressions account for harelip in their offspring. Yet the average lay person's dental knowledge is still a curious combination of fact, folklore, and proprietary nostrum or food-product advertising, and much of the teacher's dental knowledge comes from the same sources.

Stripped of fad, fallacy, and folklore, not more than six things can be taught in a sound dental health program. The most important dental health habit to acquire early is the habit of regular dental inspection, treatment, and filling of cavities. The next important attitude to promote is the desire to eat a fortified, well-balanced diet for good growth, and a low sugar and low starch diet for good teeth. A third attitude to attain is the idea that toothbrushing, properly done, can accomplish a few minor but worthwhile objectives. A fourth knowledge that can be taught is the fact that mouth habits affect the arrangement of teeth, and that unsightly tooth arrangement may be corrected by the orthodontist. A fifth attitude that should be taught thoroughly is the use of drugs and proprietary mouth products *only on the advice or prescription of the dentist or some other qualified person.* The sixth and final objective in a school child's dental health education might well be the development of a concept in which the dentist is a friend and not an ogre to be feared.

A program for regular inspection and tooth care has been placed as the first objective in dental and health education, since it is the most effective preventive program that dentistry has to offer until the dentist can control

the dietary habits or, perhaps, the heredity of his patients. Some of the outstanding attitudes or habits to teach in a good dental operative program are an early visit to the dentist (at pre-school age, preferably, since many three-year-olds have cavities); periodic visits thereafter; all cavities filled when small; service rendered by radiograms as an aid to early detection of cavities; the synonomy of the terms "gumboils" and infected teeth; and the desirability of adequate care for the first set of teeth until eleven or twelve years of age. Contrast the knowledges that lie behind these attitudes with those, as revealed by a questionnaire, which were held by a group of rural schoolteachers in a Normal College class last summer. "It takes longer than a month for a tooth to decay." Yes, 25; No, 30. "A severe toothache means that a cavity has gone too close to the pulp to be filled." Yes, 15; No, 35. "The high cost of the metals that are used to fill teeth make dentistry costly for the patient." Yes, 25; No, 30. "A tooth may die that has developed no cavity and received no blow." Yes, 30; No, 25. "Baby teeth with cavities should be treated by ——" Cement filling, 47; Permanent metal fillings, 7. Two members of this class of sixty-five knew the significance of the term "orthodontist," one of "calculus," four of "Lactobacillus acidophilus," five of "malocclusion," seventeen of "oral cavity," eighteen of "focal infection," nineteen of "deciduous," and twenty-two of "dental caries."

Not only lay people, but the dentist, himself, have been bombarded by conflicting statements about dietary aids in the prevention of dental caries. The —— Company has mailed the dentist a pamphlet which attempts to show him that lack of phosphorous causes dental caries and that the prescription of —— dicalcium phosphate will arrest caries. The makers of —— have calcium and vitamin C trapped in a tin can to do the same thing for each patient of the dentist. The dentist's local dairyman tells him to get his patients on a diet of irradiated, pasteurized milk and work himself out of a job. The —— Company sends young women, who are clothed in patriotic red-white-and-blue dresses, to the dentist's office to give —— gum to his patients to keep their teeth exercised, clean, and free from dental caries. The enormous bombardment of rival dietary claims has accomplished three things: It has caused many teachers, many public health workers, and some dentists to forget that the human being has his own typical physiology which definitely limits the realization of the advertiser's claims; to forget that an adequate and fortified diet helps a child grow jaws and calcify well formed teeth in early life, but does not necessarily prevent dental caries; and to forget that dental caries, after all, is a bacterial disease as is tuberculosis, smallpox, or impetigo. Public health workers should review the work of the Michigan Dental Caries Research Group and teach its dietary conclusions to Michigan schoolteachers.

Health workers and health teachers must learn that toothbrushing is *not* an entire mouth health program. Toothbrushing will clean certain surfaces of teeth and make teeth more attractive. Performed properly, it may assist to prevent cervical cavities and help to prevent pyorrhetic gums. It will not prevent fissure and proximal caries. A clean tooth may not decay, but a toothbrush will not secure a clean tooth.

The knowledge that mal-arranged teeth are not necessarily inherited but that much malocclusion is definitely preventable, should be useful knowledge for the school child. Many a school child deforms the arrangement of his teeth by biting his lip, his tongue, his cheek, a pencil, or his thumb nail. Children need to realize further that adequate care of their deciduous and young permanent teeth will do more than any other single thing to prevent irregular teeth.

Today, dental nostrums, that are not only dangerous but deadly, are sold directly over the drug store counter to the dentist's patients. A tooth paste is sold that contains a cresol which has also been used as a sheep dip; one of the pyorrhea cures that is sold, is essentially forty-one per cent sulphuric acid; a number of stain removers consist of pink, ten per cent, hydrochloric acid solutions; three teething lotions make use of powerful, central nervous system depressants; and thirty-three sedatives employ amidopyrine, a drug which may incite an agranulocytosis in the susceptible patient. Much of the information that is possessed by the Council on Dental Therapeutics needs to be broadcast more widely to the public.

When an occasional school-child patient is dragged shrieking up the stairs on his first visit to the dentist and thrust bodily into the dentist's reception room, a tangle of protesting arms and legs, something is wrong with the dental health attitudes that he has been taught. The environment that causes a seven-year-old boy to go to the dentist's office on his first visit in mortal fear for his own life, does not induce mental hygienic living on the part of the small boy or mental hygienic operating on the part of the dentist. The occasional, badly-frightened school child constitutes an argument for this last point that has been made in the teaching of a six-point, dental health program.

The writer is not qualified to enter an argument to determine whether a person who is trained in the medical health sciences, or the classroom teacher who is trained in education, is best prepared to teach dental health education to the school child. An editorial in a recent issue of the Bulletin presents an argument for the person trained in medical health sciences*, while a recent publication of the Michigan Joint Committee on Health Education delineates a program that is based upon direction by the classroom

*Editorial: The Unique Function of a School Health Association. Bul. M.S.H.A. 4:9-10. November, 1937.

teacher.** When a group of teachers is found that subscribes very definitely to the attitudes that the roots of deciduous teeth fertilize the crowns of the permanent teeth, that irregular teeth are usually inherited, that harelip is caused by maternal impressions, that the human animal has three dentitions, that dental caries is due to acid mouth, that chewing-gum is beneficial to teeth, and that "Anacin" is better than "Aspirin" to deaden pain, the writer is more than willing to subscribe to the conclusion, "The dental health education of the schoolteacher, who directs a dental health program, should be delegated to one who is trained specifically in the health science that is concerned."

**Michigan Joint Committee On Health Education: The Problem Solving Approach In Health Teaching; School Health Bulletin No. 2. Ann Arbor, Lowry Printing Company. 1937. Pp. 31.

Dr. George P. Barth, 1872-1937.—Dr. George P. Barth, who died on October 23, 1937, was one of the organizers of The American Association of School Physicians now the American School Health Association.

It is given to few men during their active professional careers to span more than one-half of the years of a new public health movement. Such was the record of Dr. Barth who was a pioneer in the field of School Hygiene in this country.

He was born in Milwaukee, and received his early schooling in that city. In 1892 he was graduated from the University of Wisconsin, and in 1898 from the Medical School of the University of Pennsylvania. He practiced medicine in Milwaukee until 1909, and then became associated with the city school system as Medical Inspector. In 1920 his office was consolidated with a corresponding unit in the City Health Department, which supervised the work in the parochial schools.

The Division of School Hygiene, under the direction of Dr. Barth, grew steadily during the years, so that at the time of his death it covered the services necessary in two hundred schools and employed thirty-one part-time physicians, the part-time duties of eighty-five field nurses, an instructor of Nutrition, and a personnel of eleven in the Sub-Division of Dental Hygiene.

His passing is a distinct loss to the School Hygiene movement, and is felt deeply by all who knew him through the many years of his faithful service in this field.

AN EXPERIMENT IN HEALTH TEACHING IN ONTARIO*

PART I: *The Background of the Experiment*

J. T. PHAIR, M.B., D.P.H.
Chief Medical Officer of Health for Ontario

My original interest in the subject of health teaching is associated with the early days of school medical inspection in Ontario. In those days, the interest of the average school principal in the subject of health was divided between the prompt exclusion of communicables and the rapid response of the school physician or nurse in the event of an emergency; while the teacher was largely concerned with the amount of time stolen from the curriculum by our entry into the classroom. My impression was undoubtedly influenced by bias; but as noted in my first public presentation of the subject of which there is any available record, some nineteen years ago, I implied that, in the main, she was content if her flock remained intact for the time allotted to their stay in her particular room; and that her contribution was confined to seeing that little Johnnie brought a note when he was absent; that he went through certain stereotyped movements often enough so that when the supervisor or drill inspector made his annual visit to the school the pupils would be reasonably familiar with the exercises which were supposedly designed to meet the physical activities of the particular grade of which she was in charge. Some of them did, apparently, make reference on occasion to physiology and anatomy, with special emphasis to the horror of alcohol and tobacco. The wearing of rubbers in the classroom was interdicted because it caused defective vision, and the child with otorrhea became a classroom concern because of the odour associated with the discharge.

When, on occasion, I became retrospective, I sensed that I was not alone in my feeling of distress at the absence of any serious attempt at formal or informal health instruction in the elementary school. Equal concern was exhibited by some of those associated with me in the direction of the school health service. Their interest resulted in an interpretation of the objectives of health service, which ultimately brought about a condition of affairs which was almost peculiar to Ontario, namely, the assumption of the responsibility for such teaching by the school health staff. Originating as a temporary expedient, it rapidly became a prerogative. It has taken all our best efforts to undo the unfortunate influence of this policy.

In my early administrative days, I was influenced by those ardent advocates of this doctrine, who, in their unrestrained enthusiasm, constantly emphasized the contribution to be made by school medical and nursing supervision to the present and future health of those children who might be subjected to its influence. I can recall in my advocacy of school health super-

*Abstracted by Earl E. Kleinschmidt, M.D., from Canadian Public Health Journal, April, 1937. Pp. 166.

vision, reciting the list of objectives and emphashizing the role of the school health staff as teachers.

Then, some fifteen years ago, as Chief School Medical officer for Ontario, I found my contact with those directing the educational program of the province more intimate; and an astute, but kindly, pedagogue turned administrator asked me to defend my presumption that doctors, dentists, and nurses were the logical individuals to influence either the present or future health behaviour of children of school age. At first, I viewed with a measure of resentment his failure to accept my proposed panacea; then, with concern; and with respect only when he had passed on.

The resulting doubt in the belief that those I represented were the best qualified to lead the next generation into the paths of health interest, was my first manifestation of heresy. When first I became conscious that perhaps my previous conception of the contribution of the school health staff needed re-adjustment, I recalled that I had never been permitted to hear one of my staff give a health talk, and I remembered my own feeling of inadequacy when asked to address a classroom of children on any health subject.

I understand that the path from heresy to iconoclasm is downhill; and I recall the attitude of sorrowing concern exhibited by some of those previously mentioned associates when I haltingly confided my disbeliefs in the saving grace of the faith to whose tenets they so strongly subscribed. Here might I say that I am wholly conscious of the significance of the contribution which can be made to the improvement of the physical status of the school-age child by those who play a part in the program of school health supervision. My belief in the importance of this contribution has never wavered. I am only critical of the idea that they are the logical agents to direct the presumably normal child into channels of permanent health interest. Desirable auxiliaries —yes; but an acceptable substitute for an informed, concerned teacher—no!

Our first evidence of success was noted when those responsible for the direction of the teacher-training schools granted our request that we be allowed to supplement the instruction in hygiene and physiology being given in such schools.

The formation of a Joint Committee of representatives of the Departments of Education and of Health to consider the subect of health teaching in elementary schools was the next important development. Its formation was followed by the authorization of a summer course in health teaching, and the giving of a definite status to the course. The action of the Department of Education in delegating to the Department of Health the responsibility for passing judgment on the health of those seeking admission to the teacher-training schools demonstrates not only the intimacy of the relationship now existing between these two significant departments of Government, but is a

further proof of the growing belief that we are on the way to approximate our first objective.

Referred to briefly, our efforts sound rather trivial and not worthy of special comment, but I ask you to remember that change in educational procedure must of necessity be slow; that our activities were not considered to be what may be described as our major official duties and that the heads of the Department of which we were a part were unappreciative as to the extent of the time and effort being devoted to such activities; that we were officers of one department of government presumably attempting to point out to the officers of another their responsibilities. I do not wish to imply that we were without friends at court in the Department of Education. Much of our success can be ascribed to the continued interest of the Chief Inspector of Public and Separate Schools in Ontario, who was without bias in his review of our suggestions.

Our relations with those in charge of the program of physical instruction in the school have not been as intimate as I should have liked. We enthusiastically subscribe to the need for physical activity in the child, the youth, and adult; we willingly admit that interest in such activity may have to be guided, but we cannot accept any program which is unapplicable to the 6,000 rural schools in the province. Our interest in ensuring a well-defined place for the specialist in physical instruction in the program is dampened by our contact with those apparently accepted members of this group who appear to believe that activity, either free or directed, for the mass of children consists of formal exercises in the classroom, and watching the school team play that of its neighbouring rival on a nearby athletic field.

Firstly, any ultimately effective scheme of health education must be country-wide in its application. It, therefore, must be built around the grade teacher, not the specialist.

Secondly, such a scheme will be compounded of the best ingredients that the physician, the dentist, the nurse, the physical educator, the psychologist, the psychiatrist, and the teacher have to offer, designed to be willingly taken, not forcibly or surreptitiously administered.

Thirdly, such sound health teaching has little opportunity for fruition in an educational system, the success of which is measured solely by the continued rapid progression of the orginal raw material through the assigned grades.

Fourthly, a well concerted effort must be made to create a new concept in the public mind of what the school might properly have to offer.

Fifthly, in view of the concern with disease and the manifest lack of interest in health on the part of the average individual, it might be wise to consider if we have not been swinging a little too far to the left in our enthusiasm for positive teaching and abhorrence of the negative.

Lastly, there have always been individuals with vision in the field of

education who were appreciative of the need for change, but, speaking for the Province of Ontario, at no time were they in such force as to-day.

PART II: *The Experiment*

MARY POWER, B.A., *Department of Health and*
R. H. ROBERTS, M.A., *Department of Education*

The effort to determine the effectiveness of the proposed program of health teaching involved its trial in city, town, village, and rural schools. More than 2,500 children accommodated in 61 classrooms were included in the Demonstration, and the work was carried on during eight months—from September, 1931, to April, 1932. Each teacher was supplied with carefully selected materials and suggested aids to supplement the outline of instruction for the grade. The teacher was asked to evaluate the material supplied, it being felt that everything used in the study should be critically reviewed by the teacher. The inspectors in six areas chosen were kept advised of the progress of the work, and the teachers were visited twice by those in charge of the experiment. Not only was the material evaluated, but information was sought from the teachers which would permit of the program itself being subjected to intimate criticism. Constructive suggestions were sought. Two of these related to the preparation of a handbook and the providing of a summer course.

The sixty-one teachers participating in the Demonstration may be considered as a cross-section of the elementary teachers of Ontario; it may safely be said, therefore: (1) that there is general interest in the subject of health teaching; (2) teachers are striving to find a plan whereby the subject may be presented more adequately than is possible under existing conditions where the only available aid is an ungraded text and any free or inexpensive material the teacher may secure from voluntary or commercial agencies.

Those associated with the study made no definite recommendations in the report, but suggested that the Department of Education appoint one or more members of its staff to discuss with them the report and its findings. As a result of the consideration of the findings by the two departments, a Joint Committee was named by the Prime Minister. It consisted of the Director of Professional Training and the Chief Inspector of Public and Separate Schools as consultant members from the Department of Education, and the Director of the Division of Child Hygiene as a consultant member from the Department of Health.

Summer School for Teachers-in-Service

Recognizing that the responsibility for health education rests upon the teaching body, the Joint Committee recommended to the Minister of Education in 1932 that a course in health teaching leading to an elementary certificate in the subject be included in the summer courses for teachers. Approval was given and in July, 1933, the first course was provided. Dr. J. T. Phair

being designated principal. A handbook which was in the process of preparation was used as an outline for the teachers in this course.

Since the summer school was part of the experiment, the Committee approached the matter of organization and curriculum experimentally. Four main divisions were finally accepted and these have served as the basis of the course during the last four years.

1. The first division was not too specifically defined but was named Health Education in relation to the Work of the Elementary School.

2. The second division dealt with the technical and scientific information required by the teacher in preparation for health instruction and health service.

3. The third division was a series of demonstrations of classroom procedures and activities in health education.

4. The fourth division included field trips to provide the students with practical knowledge relating to specific community health problems.

The field trips included visits to a dairy farm, a milk pasteurization and distribution plant, and suburban filtration and sewage disposal plants. The original objective in visiting the dairy farm was to observe the production and care of milk under the best possible conditions of cleanliness and health.

A visit was made to the Museum of Science, Buffalo, New York. This museum now houses a replica of the famous glass man of Dresden, and other anatomical models shown at the Century of Progress Health Exhibit in Chicago.

Following the course, the teachers are given service upon request by the Division of Health Education of the Department of Health. Through this service the teachers receive publications of the Department of Health, issued from time to time, which may be of value in health teaching; revised lists of publications and agencies covering health references for teachers and pupils, and information regarding free and inexpensive material useful as an aid in health teaching in the classroom; help with the planning of projects and units in the classroom; loan service of (a) books and pamphlets on health education and teaching methods—for teachers, (b) supplementary readers on health—for pupils of specified grades, and (c) visual aids and devices which have been tested in the classroom and found to have value for the specified grade.

In order that the Committee may keep in touch with subsequent classroom teaching, members of the Joint Committee visit the schools during the year. They have been able to evaluate, to a certain extent, the effectiveness of the summer course in helping the teachers. These visits are in no way inspection visits. They afford opportunity for discussion of problems with the teacher. As far as possible the work has been maintained on the basis of an experiment, and the teachers consider their programs as contributing to the experiment. Officials of the Department of Education regard these follow-up visits favourably, and have offered every facility to make them worth while.

EDITORIALS

What shall it profit a child if he gain the whole curriculum and lose his health.

The article on "Neglected Health Factors in Public Schools," appearing on page 61 of this Journal discusses conditions that are all too common.

The short noonday intermission for children of the elementary schools is a health menace in many communities other than New York City. Since the table given by Dr. Rosenson is based on information twelve years old, the editor recently queried Superintendents of the schools in the ten cities mentioned. Nine have replied.

Length of period allowed in the public elementary schools for intermission between the morning session and the afternoon session:

Baltimore, Md.	Elementary schools—one and one-fourth hours. Platoon schools—one hour.
Boston, Mass.	One and one-half hours to one and three-quarter hours.
Cleveland, O.	One and one-half hours.
Detroit, Mich.	58% have one and one-fourth hours, 35% have one hour, 7% have less than one hour.
Los Angeles, Calif.	One hour.*
Philadelphia, Pa.	One and one-half hours.
Pittsburgh, Pa.	Kindergarten, first and second grades have one hour and thirty-five minutes. Other grades have one and one-fourth hours.
St. Louis, Mo.	One hour.
San Francisco. Calif.	Fifty-five minutes.

* Two-thirds of the Los Angeles elementary schools operate cafeterias.

These reports indicate that still no one of the ten large cities countenances so short an intermission as does New York City. In most of them the time allotment is one hour or more. For whose benefit is this all too short noon intermission? Certainly not for the sake of the child.

Regular attendance at school is essential for the best progress of the child concerned. Any rule, custom, or method of financial allotment, however, that tends to cause a child to go to school when health protection demands that he stay at home is evil, and in the long run does not result either in health or in scholastic progress.

Too heavy a school load is not an attribute of only our large cities. Secondary school teachers in most school districts tend to forget, when assigning lessons, that assignments are also being made in from two to five other subjects. It seems to your editor that it is an important part of the functions of the school principal and of the Superintendent to keep the total load within proper bounds.

Insanitary schools, unsafe or inadequate toilets, too large classes, too short rest and recreation periods, and ignorance or malpractice in the field of mental hygiene are fairly common in many communities. To improve and to guide these factors seem proper objectives in the school health program. A more active interest in them should be manifested by school physicians, school

nurses, and others interested in the physical welfare and mental safety of school children.

New York City schools are merely the text of the author. The evils he complains about are not unique to that community. A careful and thoughtful look about in almost any school system will disclose evils similar to those he discusses.

Eternal vigilance is the price of health. H. H. K.

* * * * *

"The Nassau Medical News," May, 1937, published by the Medical Society of Nassau County, New York State, asks the pertinent question "How Much Health Will the Public Take?" They report that an organization of women in one of their villages recommends to the medical profession of Nassau County "that all doctors establish the taking of blood Wassermann tests as a routine procedure in the office and hospital." This was an unsolicited resolution adopted by representative club women. The challenge is accepted as a cause for "re-appraisal and re-alignment of our ideas as to what we can do and what we should do in the matter of health education of the public." The The Medical Society received this jolt as a result of one of their members speaking to these club women on congenital syphilis. To quote further the doctor "went to the meeting, rather wondering how far he might go in discussing what but yesterday was considered a 'delicate' subject. To his surprise he found an audience harboring a little feeling of resentment—not because of what he had to tell them, but because they had not been told sooner. The doctor pointed out that although a routine Wassermann Test on all pregnant women would disclose many unsuspected cases of syphilis and make possible the safe birth of many babies who would otherwise be lost or damaged, such a routine test would not be possible in private practice, because the mothers would resent the implication that they might be infected and would not permit the test to be made."

Should we, as school health workers, not take a lesson from this challenge of the club women who want to be told? When the school offers "an annual health examination" should we allow intelligent patrons of the school to believe that the school provides all the health examination and medical supervision that can benefit their children? Will the parents not have a feeling of resentment when they discover limitations of the school examination and advice? Wouldn't it be better to tell parents something of the possibilities of medical health supervision by a pediatrician who cares for their child in sickness and in health. Are we doing our job of public education as effectively as we should when parents who can afford private dental care wait until adolescence for their children before they begin a consistent program of filling for dental caries?—H. H. M.

ABSTRACTS

Hereditary Mental Defects.— Professor von Verschuer of Frankfort University addressed the International Congress for Folk Study at Paris on the incidence of hereditary disease. He quoted statistics based on the genetic studies that have been in progress in Germany. It has been estimated that about 80 per cent of feeblemindedness is conditioned by heredity, 20 per cent by environment. . . . Data are to be elicited by the survey of the homogeneous resident population of a restricted area; an examination of 37,000 inhabitants of Thuringia disclosed an average of 5.9 feebleminded persons per thousand of population. If this proportion is considered valid for the entire German reich, the number of feebleminded would be about 400,000; among the infirm population the proportion would be four times greater. Yet the foregoing estimate fails to include the large number of persons of dull mentality. To the latter group belong the vast majority of the pupil population of the special schools for backward children; namely, those pupils who cannot keep up with the common school curriculum. From 20 to 30 per cent of all school children are assigned to the special schools. This means that, of a national population of 67,000,000, from 1,500,000 to 2,000,000 persons remain at the intelligence level of special school pupils. . . . Lenz believes that the true distribution of the main categories of the feebleminded in a given population is something like 0.25 per cent idiots, 0.5 per cent imbeciles and from 20 to 30 per cent weakminded (morons).

Bonn University's Institute of Hygiene in collaboration with the municipal health department has investigated the relationship of alcoholism to feeblemindedness and defecitve heredity. Dr. Lechner found that of 254 pupils in the special schools for backward 205 (80.7 per cent) were congenitally tainted. The accompanying table lists the familiar defects established and the percental distribution of these among the 205 children studied.

Both parents of extremely low intelligence	4.1
Father alone feebleminded	5.9
Mother alone feebleminded	17.2
Parents of subnormal intelligence	21.3
Feeblemindedness in ascendancy but not in parents	3.0
Feebleminded siblings	6.5
Epilepsy	8.3
Other mental defects of parents	1.8
Alcoholism of parents and grandparents	29.0
Syphilis	2.3

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The Social Cost of the Feebleminded Family.—Two studies of the cost to society of the feebleminded family have recently been published. The first study was made by the welfare bureau of a city in western Germany.

It traces the cost to society since the year 1880 of a certain defective family. Eighty members of this family received a total of 201 sentences for various offenses, nineteen children were committed to special industrial schools, ten members of the family were prostitutes. This family had cost the community a total of 205,000 reichsmarks, a sum that corresponds roughly to the amount of taxes paid by 10,000 workers, or to the expense of erecting sixty-eight workers' colony homes.—The Journal, A. M. A., January 1, 1938. pp. 58-60.

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A County School Health Program.—By Ralph Ten Have, M. D., Ottowa Co. Health Commissioner.—Last year our department made it a point to visit each school during the first two weeks of the school year. There are always several new teachers, and all blanks and information from the Health Department should be replaced each year. Each teacher is supplied with special report forms for reporting contagion, with franked envelopes addressed to the Health Department, and with communicable disease information booklets.

Inspection of school children is most essential in the beginning of the school year. There is usually considerable impetigo and also contagion which has not been reported.

The school building is inspected particularly for sanitary equipment and lighting. A comparison is made with the inspection reports of the previous year and improvements are noted.

As a special project this year, the older school children are assisting in collecting water samples from private wells. This is being done in a very small section of the County, to avoid obtaining too large a number of specimens at one time for the State Laboratory to examine. The purpose of this survey is to give the sanitary engineer an opportunity to assist in the improvement of sanitation of private premises, an activity in which it has been difficult to interest the public.

There is a great amount of interest in the testing of private water supplies. This is being used as a means to contact private home owners in the rural areas who may be in need of advice relative to improvement of wells and sewage disposal system.

A large number of the schools have made extensive improvements in sanitary equipment. The common drinking cup and towel are being abandoned. If they are still found, they are immediately discarded by the Health Department, since this appears to be the only method left to convince certain communities that their use is a hazard to public health. A rigid enforcement of this law which prohibits the use of the common towel and drinking cup has brought about considerable improvements, such as the installation of drinking fountains and better washing facilities. There has been very little criticism of the program, and much favorable comment on the part of many parents.—Bulletin Mich. School Health Ass'n. Dec. 1937, p. 3.

Corrective Supervised Exercise For Postural Defects.—Also, it is well to remember that correcting the standing posture alone is not enough. We should try to improve the manner of walking. A good dancing master who has a knowledge of postural deformities can be of great service to these children.

Exercise for Knock-knee.

1. (a) Massage and (b) Press knee out. Combine with exercise for weak feet.
2. Lie on back. Bend knee up and at the same time out aside from hipline. When stretching leg use resistance for strength.
3. Feet apart, toes pointed, knees stiff. Raise legs up slowly, return, repeat three time.
4. Put feet sole to sole, bend knees, return five times.
5. Lie on back, turn feet out from hip, then turn them back (repeat five times).
6. Standing—Place one foot on chair (hands on hips) keep knee straight, then bend forward, trying to touch knee with nose.
7. Stand and try to press calves of legs together.
8. Hobby horse. (1) Massage every morning and night. Forcibly straighten ten minutes daily. (2) Bicycle riding. Horseback riding.

Lordosis—

1. Limbering-up exercises.
2. Stand at "attention."
3. Stand against wall and try to touch wall with entire spine.
4. Raise arms above head, bend forward (straight knees) touch floor with hands. Touch knees with your nose.
5. "March" bending the knees way up.
6. "High kick."
7. (a) Sit on floor, straight back, straight knees. (b) Place hands behind neck, pulling elbows back and shoulder blades together. (c) Rest, placing hands behind you on the floor. Then repeat exercises. (d) Repeat whole ten times.

Exercises for Weak Feet—

1. Toe raising.
2. Toe raising, deep knee-bending, return to toe raising heels down (five times.)
3. Walk in straight line for five minutes in such manner that when the heel strikes the floor, the rest of the foot pivots inward forty-five degrees.
4. Turn feet on outer border, return (repeat ten times).
5. Raise toes off floor.
6. Walk on tip-toes (feet turned slightly inwards) as much as possible.
7. Lie on back, place sole against sole, knees bent, stretch (repeat five times).

8. Ostrich step.

9. Pick up a dozen marbles with toes and put into a cup.

Curve—

1. Place right hand behind neck, left hand on hip or higher. Then bend to the left.

2. Make fists of hands, place right fist on top of your head, left behind your back, then bend to you left and push with your fists in different directions.

3. Lie on right side, have someone hold your feet down, then place right hand behind your neck, left hand on hip then raise off bed.

4. Sit on floor, straight legs, straight back. Have someone take hold of your hands and pull them up hard. This is a left dorsal curve, chart. If patient has a curvature to the right, the exercise should be taken in the opposite direction.

Exercises for Round Shoulders—

1. Arm swinging, head up.

2. Fold hands together behind back, pull shoulder blades together.

3. Sit with a wand or broomstick across back with arms pulled back by this.

4. Place hands behind neck and pull elbows as far back and up as you can.

5. Make fists of hands, cross hands across chest, then throw arms out-back-up (ten times).

6. Lie on stomach. Have someone hold your feet down. Then place hands behind neck and raise off bed (or floor), pulling elbows up and back as far as possible.

7. Walk with palms of hands turned out. In order to get full benefit from these exercises, they should be done using effort so that the exerciser feels a strain at the end of each movement. They should be done effortlessly.

Abdominal Exercises for Pot-Belly—

(Always start with a few limbering-up exercises).

1. Lying down. (a) Pull abdomen in as much as you can. (b) Expand it. Watch breathing. This exercise is more effective if a weight such as a book is placed on the abdomen (ten times).

2. Bicycling in the air.

3. Lie on floor. Sit up without assistance or elbows.

4. (a) Stand alongside of wall. Try to touch it with the entire spine. (b) Take arms down. Take step away from the wall. Hold that posture.

5. Swing down, touch floor with hands, without bending knees.

6. Deep-knee-bending. Place hands between knees on floor. Then with a quick jump, throw legs out and back holding stomach in and contract buttock muscles. (Always finish with a few breathing exercises.)

Summary—

1. Twenty-six children with postural defects at a Day Nursery and twenty-four patients in private practice were given corrective exercises regularly by a posture worker under the supervision of a pediatrist. The age varied between one and one-half years and eleven years. Many of these children had these posture defects for several years without improvement before this treatment was started. The exercises were conducted twice weekly at the nursery for five months and weekly or at less frequent intervals at the office with the private practice group for from two months to one and one-half years.

2. Over ninety per cent of the children were benefited to some degree by the exercises. About one-third were cured entirely of all postural defects and the majority of the others showed marked improvement.

3. The best results were obtained in children under six years of age.

4. Lateral curvature of spine and holding head forward were most readily corrected. Knock-knees and flat feet were remarkably improved in about eighty-five per cent of the private practice group of children.

5 The advisability and feasibility of having exercise classes for children with postural defects is pointed out. Corrective Supervised Exercises for Postural Defects. Edward T. Wilkes, M.D., and Elizabeth Just, Long Island City. New York State Journal of Medicine, September 15, 1937, pages 1570-1574.

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Physical Education.— The Societe Medical Belge d'Education Physique et de Sports investigated the situation in the schools with respect to the physical education of children who exhibit physical or mental abnormality. The society proposed to make certain recommendations with respect to school children whose condition bordered on the pathologic. The investigating committees met from time to time under the joint chairmanship of Professor de Munter of the University of Liege and Dr. J. De Vaucleroy, chief medical officer of Brussels schools.

The report of the committees was discussed by the society at two of its general assemblies and the following conclusions were adopted:

1. The rehabilitation of physically subnormal children has been the function of the special colony, the preventorium, and so on. The school medical officer has merely to designate the children in question and observe their reactions. The application of suitable corrective measures should be confided, under medical supervision, to the teacher, the nurse, the dietitian, the monitress, and the instructor in physical education.

2. A school should devote itself to a program of physical education suitable for all its pupils. The school doctor should indicate to the teacher those children who present physical anomalies, and should furnish the par-

ents useful information and advice so that these children may receive proper care. The school physician should not undertake medical treatment of the children.

3. After the schools have adopted well organized programs of physical education for all the pupil population, special classes in corrective gymnastics will be organized in the larger centers. The instructor of a special class will be a graduate in physical education, and its membership will be selected according to the recommendations of the school medical officer, who in addition will divide the pupils into various groups and specify the requisite measures. The pupils in the special classes will first of all be differentiated on the basis of respiratory anomalies and vertebral defects. Pathologic cases will be directed to an orthopedist.

4. A graduate instructor in physical education is an indispensable member of the staff of any education institution for mentally abnormal children if the optimal sensory, motor, and mental development is to be assured, Journal, A. M. A., December 4, 1937, p. 1922.

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Physical Training Bill.—In the House of Commons Mr. Oliver Stanley, president of the Board of Education, moved the second reading of the physical training and recreation bill, which establishes a national advisory council, which, in conjunction with local bodies, will provide physical training for the people. The chairman of the council will be Sir Henry Pelham, permanent secretary to the Board of Education. A national college is to be set up for the training of instructors, Mr. Stanley said that in the last few years more publicity had been given to physical training in Germany and Italy, which might or might not be militaristic, but it was the democratic states Sweden and Czechoslovakia that first set an example to Europe in this training. He thought we should draw valuable lessons from their systems, which had no element of compulsion, but at the same time we would not ignore the developments that had taken place in the last twenty or thirty years in our own country. We had not any less enthusiasm for physical exercises, but, while they concentrated on the training and development of the body of the individual, we had concentrated on games and the team spirit. This had the danger that in a highly urbanized state the participant tended to degenerate into the spectator. We did not want to substitute physical training for games, but to supplement them with it. The "keep fit" slogan was one of the best ever invented. What was not so widely known was the remedial effect of physical training on some of those minor, and indeed some of the major, ills to which a highly civilized and industrialized community was liable. The habits of our civilization did result in certain physical defects. The machinery necessary to ensure that the school child would come to physical training with a well nourished body was now provided. The

scheme was directed not only to physical training, but also to recreation. The modern industrial trend was to shorten working hours. The masses of the people had greater leisure than ever at any time in our history. This leisure required something more than football matches and cinemas. The government scheme would not confine assistance to activities of the body, but would include activities of the mind. Bertrand Russell had said "To be able to fill leisure intelligently is the last product of civilization." London Letter, The Journal of the American Medical Association, May 8, 1937, page 1663.

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Health of Preschool Children.— Henderson examined 1,530 preschool children to determine at what age physical defects appeared. Of 1,014 children less than 2 years of age, 526 (51 per cent) had physical defects other than constipation and disorders due to faulty methods of feeding; and of the 516 children over this age 362 (70 per cent) had one or more bodily defects. The fifteen most obvious disorders were digestive (104), congenital heart disease (9), skin disease (145), hernia (52), orthopedic defects (36), defects of the nervous system (55), diseases of the eye (100), rickets (13), enlarged tonsils and adenoids (345), otorrhea (61), palpable cervical glands (428), carious teeth (245), respiratory diseases (255), anemia (49), and malnutrition (95. There were fourteen other defects (thrush, harelip, goiter, and the like) that were self evident. The author believes that to state, without qualification, that 60 per cent of the 1,530 children examined had physical defects would be to give a grossly distorted picture of the health of the preschool child. If it is agreed that unusual palpability of neck glands is not necessarily, and in fact rarely is, a sign of disease, and that simple enlargement of the tonsils has no adverse effect on the child's health, only a minority of preschool children will be found to have physical defects other than carious teeth. But a substantial minority (16.6 per cent) have had or still have attacks of bronchitis, which in more than 50 per cent of cases followed an infective condition of the nasopharynx or respiratory tract of some other member of the family. Malnutrition was a problem of importance, but a problem of much greater importance was that 30 per cent of 1,214 families whose economic state was specially investigated had incomes insufficient in amount to buy the food stated by the Nutrition Committee of the British Medical Association to be the minimum essential for health. Carious teeth became a problem only after the age of 2 years, but then it became a serious one, and one that increased with age. Though an increasing and more regular attendance at the infant welfare centers will help to improve and foster the health,—and thereby the happiness—of the preschool child, it is still felt that no great advance in the standard of health of the citizen of tomorrow can be expected until the problem of adequate feeding of all the children in the community is scientifically and thoroughly managed.—Journal, A. M. A., September 11, 1937, p. 909.

Measles.— McKhann* in his summary says:—Despite the inadequacy of the public health control of measles and the lack of a means of active immunization, there has been a steady decline in the deathrate for the disease. This decline is thought to be due to recognition of the dangers of measles, prevention of needless exposure of young children, isolation of patients with measles from one another to prevent cross-infection with secondary organisms, and a general improvement in child health nutrition.

Human immune bodies in the form of convalescent serum, adult immune serum or placental extract may be used to prevent or to attenuate the disease. Immune globulin, human (placental extract), as a source of material, and the lyophile process of preservation have made human immune bodies more widely available. If serum is to be used at all in normal healthy children, it should be given sufficiently late in the incubation period, i. e., between five and nine days after exposure, so that attenuation of the disease is obtained, as permanent immunity usually follows. Complete protection by the use of human immune bodies is of short duration, lasting only a few weeks, and is of particular advantage when used in institutions or for acutely or chronically ill, debilitated, or very young children.—**The Prevention and Modification of Measles,* Charles F. McKhann, M.D., Journal, A. M. A., December 18, 1937, p 2034.

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NOTES

Trichinosis.— During the six-year period from 1925 through 1930 there were reported in Massachusetts eighty-nine cases and six deaths from human trichinosis. For the following six-year period—1931 through 1936—there were one hundred and ninety-nine cases and ten deaths. From a statistical point of view trichnosis is therefore of increasing importance in Massachusetts, although the number of cases diagnosed and reported will always be a fraction of the actual incidence. The fatality rate is apparently something over five per cent of the cases reported—quite as large as that for typhoid fever, and sufficiently high to be of concern to anyone interested in public health.

Hall, in a recent issue of *Public Health Reports,* declares that the garbage-fed hog is the chief reservoir. The New England Journal of Medicine, October 28, 1937, page 717.

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Removing Adhesive Tape.— *To the Editor*:—Your recent editorial on methods of removing adhesive plaster from the skin, and rumors of a damage suit for injuries attributed to violent removal, lead us to suggest oil of wintergreen as a simple, painless and highly efficient means. The oil should be applied with a very small cotton swab only to the point of separation of the adhesive from the skin. If it is applied to the external surface of

the plaster the fabric will come away, leaving the adhesive material adhering to the epidermis. Chevalier Jackson, M.D., Chevalier Lawrence Jackson, M.D., Philadelphia. The Journal of the American Medical Association, July 24, 1937, page 294.

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A Praiseworthy Record.— A record worthy of commendation and emulation has been established for the school physicians in Wilwaukee, Wisconsin. Out of a total of thirty-one school physicians in that City, twenty-seven have made application for membership in the American School Health Association.

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Vermont Fosters Child Health.— The following provisions in the law of the State of Vermont for the betterment of health among school children might well be copied by those states which do not make similar provisions.

"The board of school directors may expend in any given school year from its funds a sum not to exceed three per cent of that year's school budget for current expense for such health service activities as may be necessary to provide for the improvement of the physical efficiency of school children of indigent parents. Expenditures for this purpose may include the purchase of milk for underweight or undernourished children, the purchase of ingredients for hot lunches, also expenditures for glasses, dental service, the removal of tonsils, and other health services which are approved by the town health officer and the teacher or public health nurse. The right to determine who is an indigent parent shall be in the discretion of said board."

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Vital Statistics.— For 1936 the general death rate in England and Wales with about 41 million people was 12.1 per 1,000 inhabitants, while in Illinois with somewhat less than 8 million people, the rate was 11.8. Had the rate in Illinois been equal to that in England and Wales, 2,350 more deaths would have occurred in the State.

The infant mortality rate was 59 per 1,000 births in England and Wales, and 46.7 in Illinois. At the higher rate there would have been 1,233 more infant deaths in Illinois.—Illinois Health Messenger, Department of Public Health, January 1, 1938, p. 3.

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School Dental Program.— On the evening of Friday, February 25, Dr. C. Willard Camalier, President of the American Dental Association, spoke in Buffalo, New York on "The Dentist in the School Health Program." This address was given under the auspices of the Eighth District Dental Society of New York, of the Dental Alumni of the University of Buffalo, and of the Central Council of Social Agencies of Buffalo, which is

made up of practically all of the social welfare and health groups of the community. This is a much worthwhile effort to inform those interested in the sociological and health aspects of community life regarding the need, values, and content of a dental program for children of school age.

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Bay City, Michigan.— Mr. Westman, the Health Officer, has just cooperated with the school authorities in outlining a course in public health for the schools and is cooperating with them in seeing that the educational program is carried out.

Ashland County, Michigan.— Dr. Monroe, the Health Officer, has just added to the Health Department Staff a health educator whose business is to instruct the teachers so that they may be able to instruct the pupils.

Adams County, Mississippi.— Dr. Andrew Hedmey, acting Health Officer, has a good educational program and is carrying it out with success.

Jefferson County, Alabama.— The Health Department has a director of health education, who has two main functions: (1) health education in the schools, and (2) health education of the public in general.

Drinking Fountains.— The State Department of Health of Connecticut has revised the regulations regarding drinking cups and drinking fountains. Under these new regulations, either individual drinking cups or drinking fountains must be supplied in schools. The specifications for fountains demand slanting jets, guards so that the outlet of the nozzle may not be touched, and nonfouling drainage.

Nutrition.— Under the specifications of a bill recently introduced into the Massachusetts State Legislature, Health Boards may spend funds for food for undernourished children, and are given the power to decide which children need such supplementary diet.

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The National Health Survey.—Between October 1935 and March 1936, the United States Public Health Service inquired into the health histories of 740,000 families in eighty-four urban communities in nineteen states and 36,000 families in selected rural areas in three states.

Of 2,300,000 persons surveyed in urban communities, 4.5 per cent were reported disabled on the day of the investigation. The sickness rate varied with age, however. It was 4.2 per cent for those under fifteen years. It reached a minimum of 2.5 per cent among those aged fifteen to twenty-four and then rose to a maximum of 12.1 per cent among those aged sixty-five and over. Applied to the country as a whole, it is estimated that 6,000,000 were disabled at any one time during the winter of 1935-1936 as a result of illness or injury. Acute respiratory diseases—influenza, pneumonia, and the like—caused the illness of 1,500,000 persons. Chonic diseases, such as rheumatism,

diseases of the heart, arteriosclerosis, tuberculosis, caused the illness of 2,500,000 persons. Accidents accounted for the disability of about 500,000 persons. Acute infectious diseases were responsible for about 250,000 cases of illness. Unfortunately, there is no reference to the number who were ill as a result of nervous or mental diseases. New York State Department of Health, Health News, January 31, 1938, page 18.

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Fellowships.—The following have become Fellows in the American School Health Association:

JAMES E. CHAPMAN, M.D.
State Board of Health
Jefferson, Mo.

WALTER S. CORNELL, M.D.
Board of Public Education
Philadelphia, Pa.

H. DELAMATER, M.D.
Board of Education
St. Joseph, Mo.

J. A. DOLCE, M.D.
County Health Department
Allegam, Mich.

CLARENCE D. HART, M.D.
Newberry, Mich.

PRESCOTT T. HILL, M.D.
225 Broad St.
Providence, Rhode Island

C. H. KEENE, M.D.
University of Buffalo
Buffalo, N. Y.

E. E. KLEINSCHMIDT, M.D.
University of Michigan
Ann Arbor, Mich.

MARGERY J. LORD, M.D.
City Health Department
Asheville, N. C.

HAROLD H. MITCHELL, M.D.
1825 Ditmars Blvd.
Astoria, L. I., N. Y.

LILLIAN L. NYE, M.D.
803 Lowry Medical Arts Bldg.
St. Paul, Minn.

ALFRED H. PARSONS, M.D.
18 Arrandale Ave.,
Great Neck, L. I., N. Y.

CHARLES W. PEMBERTON, M.D.
415 Odd Fellows Bldg.
Houston, Texas

MISS C. M. PLATT, R.N.
69 Orange St.
Nantucket, Mass.

G. L. PRESTON, M.D.
8 Academy St.
Canisteo, N. Y.

FRANK H. PURCELL, M.D.
1808 Eaton Tower
Detroit, Mich.

PETER O. SHEA, M.D.
City Hall
Worchester, Mass.

RICHARD G. SOUTAR, M.D.
Dir. School Health Dept.
Sacramento, Cal.

C. E. TURNER, Dr. P. H.
Massachusetts Institute of Technology
Cambridge, Mass.

L. A. VAN KLEECK, M.D.
2930 Northern Blvd.
Manhasset, N. Y.

V. K. VOLK, M.D.
Saginaw, Mich.

MARIA C. WELLS, M.D.
1438 Reeves St.
Los Angeles, Calif.

RICHARD W. WEISER, M.D.
299 McKinley Ave.
Kenmore, N. Y.

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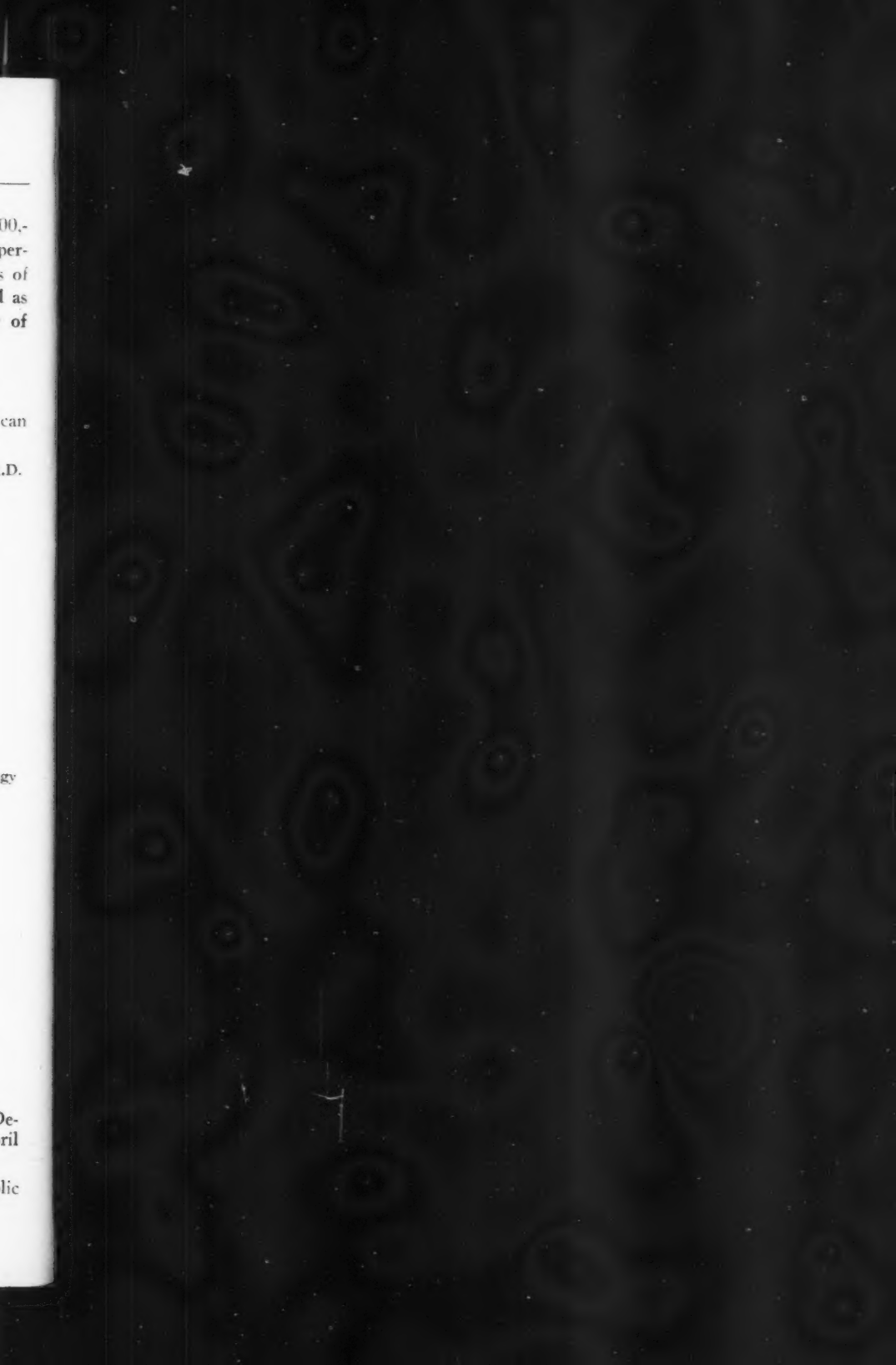
MEETINGS

The American Association for Health and Physical Education, a Department of the National Education Association, Atlanta, Georgia, April 20-23. Headquarters, the Atlanta Biltmore.

The American School Health Association, and American Public Health Association, October 24-28, Kansas City, Missouri.